

TRENDS IN LITTORINA RESEARCH IN BELGIUM (MOLLUSCA, GASTROPODA)

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The prosobranch genus Littorina has a worldwide distribution and contains quite a number of species, living in the intertidal zone of estuaries and rocky shores.

Five of the eight presently recognized NW-European species were encountered on the artificial substrates (mainly dikes and breakwaters) along the Belgian coast. These are L. littorea, L. obtusata, L. saxatilis, L. mariaae and L. neglecta. The latter two are new to the Belgian fauna.

The Belgian populations of L. saxatilis are characterized by low densities, a considerably reduced shell colour polymorphism and early maturation. An electrophoretic analysis revealed that the heterozygosity level is about 8 % lower than in populations from natural rocky coasts, whereas there are indications for a relatively high gene flow between populations.

Several factors may be responsible for these observations and a profound study of the Littorina species occurring on the artificial substrates on the sandy Channel coasts is needed. Particular attention should be paid to population ecology and genetics, demography, quantitative measurements of transport rates between populations, possible dispersal mechanisms and the role of visual selection in the determination of colour polymorphism.